

Listing of Claims:

1. (Currently amended) A ~~process for improving efficiency of a DNA amplification reaction,~~
~~wherein a method for amplifying a target DNA fragment comprising:~~
~~providing a PCR primer, in which that comprises a compound at the 5' terminus, said~~
compound selected from a group consisting of LC-Red 705, an amino group, a phosphate group,
~~biotin, DIG, DNP, TAMRA, Texas-Red, ROX, XRTC, rhodamine, LC-Red 640, a mercapto~~
group, psoralen, cholesterol, FITC, 6-FAM, TET, cy3, cy5, BODIPY 564/570, BODIPY 500/510,
BODIPY 530/550, BODIPY 581/591 ~~and oligonucleotide with a combined G and C content of at~~
~~least 25% and with at least four bases is added to a 5' terminus, is used as a primer; and~~
~~amplifying said target DNA fragment via PCR using said PCR primer.~~

Claims 2-3(canceled)

4. (Currently amended) A ~~The method process for improving efficiency of a DNA amplification~~
~~reaction according to claim 1-3, wherein said PCR is either one of asymmetric PCR and~~
~~degenerate PCR.~~

5. (Currently amended) A method for hybridizing process for improving hybridization specificity
of an oligonucleotide to a DNA comprising: wherein
providing an oligonucleotide in which a compound selected from a group consisting of
LC-Red 705, an amino group, a phosphate group, ~~biotin, DIG, DNP, TAMRA, Texas-Red, ROX,~~
XRTC, rhodamine, LC-Red 640, a mercapto group, psoralen, cholesterol, FITC, 6-FAM, TET,
cy3, cy5, BODIPY 564/570, BODIPY 500/510, BODIPY 530/550 and BODIPY 581/591 is
conjugated to a 5' terminus ~~of said oligonucleotide is used for hybridizing to said DNA; and~~
~~hybridizing said oligonucleotide to said DNA.~~

6. (New) A method for amplifying a target DNA fragment comprising:

providing a PCR primer that comprises an oligonucleotide added to a 5' terminus of said
PCR primer; and

amplifying said target DNA fragment via PCR using said PCR primer;
wherein said oligonucleotide has at least four bases and a combined G and C content of at least 50%, and said at least four bases are non-specific to the sequence of said target DNA fragment to be amplified.

7. (New) The method according to claim 6, wherein said oligonucleotide comprises no more than 40 bases, and has a quantity of a more numerous base of G and C that accounts for at least 50% of said combined G and C content, and a quantity of a more numerous base of A and T that accounts for at least 50% of a combined content of A and T.

8. (New) The method according to claim 6, wherein said PCR is either one of asymmetric PCR and degenerate PCR.

9. (New) A method for amplifying a target DNA fragment comprising:

providing a PCR primer that comprises biotin at the 5' terminus; and
amplifying said target DNA fragment via PCR using the PCR primer;
wherein said PCR is either one of asymmetric PCR and degenerate PCR.

10. (New) A method for hybridizing an oligonucleotide to a DNA comprising:

providing an oligonucleotide in which biotin is conjugated to a 5' terminus via a linker;
and
hybridizing said oligonucleotide to said DNA.

11. (New) The method according to claim 10, wherein said linker is a hydrocarbon group of 2 to 16 carbon atoms.